

Transportation-Economic Modeling – Statewide Modeling Framework

Economic development, climate change adaptation and reduction of greenhouse gas emissions (GHG) are among the top priorities for the Governor's Administration and Business, Transportation and Housing Agency (BTH). Because of the critical role of transportation, the BTH has asked the Department of Transportation (Department) to lead the state's efforts to expand and enhance analytical and modeling capabilities and data needed to assess both the economic development policies, actions and programs (such as the Goods Movement Action Plan and the GoCalifornia Mobility Strategy), and the efforts needed to implement AB 32 and SB 375 GHG emission reductions.

On October 13, 2007, the Governor signed *Assembly Bill 1721*, designating BTH as the primary state agency responsible for facilitating economic development in the state. To implement the Administration's economic development policies, BTH has developed an *Economic Development Work Plan: 2008-2010*, which summarizes BTH's proposed top 10 economic development objectives and 50 priority actions during the calendar years 2008 through 2010.

On September 30, 2008, the Governor signed *Senate Bill 375* (Steinberg, Chapter 728, Statutes of 2008), which requires California's 18 Metropolitan Planning Organizations (MPOs) to comply with AB 32 by addressing regional greenhouse gas emission reduction strategies as part of a Sustainable Communities Strategy within their Regional Transportation Plans (RTPs). Transportation modeling on a multi-regional and statewide scale will be needed in order for state agencies and the MPOs to capture cross-regional vehicle trips to quantify GHG emission reductions and land use impacts. This enhanced modeling framework is currently unavailable, and the regional modeling framework is available only in one region of the state (Sacramento).

In 2006, the Department sponsored research to assess the feasibility of regional integrated transportation and land use models. Oversight was provided by a Technical Advisory Committee comprised of modeling staff from the Department and selected California MPOs. The research recommended the implementation of a statewide integrated interregional model. It was suggested that the model framework be implemented in phases and include the statewide travel model and goods movement. The Department is moving forward with the statewide framework to provide consistent traffic flow data and goods movement data cross the State. The modeling framework will permit the MPO and Regional Transportation Planning Agency (RTPA) models to also incorporate consistent external trips data. The California Statewide Modeling Framework includes:

- Upgrade and customize the *Statewide Travel Model* to interact with the SIIM and provide an enhanced user interface. This model will be used to assess state and interregional transportation impacts in the interim until the fully integrated land use, transportation, economic model is available.
- Develop a *Statewide Integrated Interregional Economic-Transportation-Land Use Model (SIIM)*, a state-of-the-art analytical tool through a multi-year contract with UC Davis. The SIIM will allow the state and regional agencies to assess and evaluate economic, equity and environmental impacts and effectiveness of various economic development and emission reduction policies, strategies and programs.
- In collaboration with the California Air Resources Board (ARB), develop a *Statewide Multi-Modal Freight Model* that will help BTH, the Department and other stakeholders to better understand freight movement in California, and assess transportation infrastructure and network alternatives (including mobility, economic development, equity, funding, regulatory, and environmental impacts). This effort would help incorporate freight-oriented GHG emission analysis and reduction measures into transportation plans, programs and projects, and will become a component of the SIIM. This model would also help develop strategies for future state, federal and other funding for goods movement.

The total cost of the framework is \$9.5 million over three years (Fiscal Year 2009-10 through 2011-12) for contract costs.